# **APPLICATION FOR A ROAD CONSTRUCTION PERMIT**

#### WHO NEEDS TO SUBMIT THIS APPLICATION?

Anyone constructing roads (including certain driveways) and/or trails in the plantations, unorganized townships and certain towns which remain under the Maine Land Use Planning Commission ("LUPC" or "Commission") jurisdiction which:

- Require a permit in the applicable subdistrict (see Definitions and Requirements by Subdistricts page for details); and/or
- Do not otherwise conform with Standards of Section 10.27,D or other applicable standards of the Commission's Chapter 10, Land Use Districts and Standards, or the Chapter 15, Guidelines for Private Roads or Ways in the Land Use Planning Commission's Management Districts (see attached Standards for details).

Note: A driveway which is greater than 1,000 feet in length or which serves more than two lots or dwelling units is considered a *Road*.

**EXCEPTION:** In accordance with the Memorandum of Agreement (MOA) between the LUPC and the Maine Department of Transportation (MaineDOT), signed in June of 2009, MaineDOT is to utilize the **Expedited Permit Application** attached to that MOA for all non-exempt Level A and B Road Projects, all Level C Road Projects, and other MaineDOT state transportation infrastructure projects providing a bona fide public purpose instead of this application form.

#### WHERE CAN I GET HELP TO COMPLETE THIS APPLICATION?

Call the LUPC office that serves your area and ask to speak to one of our regional representatives (see below for office locations and contact information). Also, go to the LUPC web site at <a href="https://www.maine.gov/dacf/lupc/">www.maine.gov/dacf/lupc/</a> to browse through our rules and regulations, recent publications and newsletters, Commission meeting agendas, and other valuable information.

### MAILING YOUR APPLICATION

Submit your completed application and all required attachments, including the appropriate application fee, exhibits and supplements (see instructions for details) to the LUPC office serving your area.

AUGUSTA (	OFFICE .	ASHLAND OFFICE		
		Serving most of Aroostook County, and portions of northern		
		Penobscot and Piscataquis Counties		
18 Elkins Lane - Harlow Bldg.	Tel. (207) 287-2631	45 Radar Road	Tel. (207) 435-7963	
22 State House Station	FAX (207) 287-7439	Ashland, ME 04732-3600	FAX (207) 435-7184	
Augusta, ME 04333-0022				
BANGOR O	FFICE	EAST MILLINO	CKET OFFICE	
Serving Hancock, Kennebec, Knox, I	Lincoln, Sagadahoc, and Waldo	Serving southern Penobscot and A	roostook Counties, and portions of	
Counties; most of Washington Counties	ty; and all coastal islands in the	Piscataquis and northern Washington Counties		
LUPC service	ce area		-	
106 Hogan Rd, Suite 8	Tel. (207) 941-4052	191 Main Street	Tel. (207) 746-2244	
Bangor, ME 04401	FAX (207) 941-4222	East Millinocket, ME 04430	Tel. (207) 731-4398	
			FAX (207) 746-2243	
GREENVILLE	OFFICE	WEST FARMIN	GTON OFFICE	
Serving Somerset County and n	nost of Piscataquis County	Serving Franklin and Oxford Counties		
43 Lakeview Street	Tel. (207) 695-2466	133 Fyfe Rd	Tel. (207) 670-7492 OX	
P.O. Box 1107	FAX (207) 695-2380	P.O. Box 307	Tel. (207) 670-7493 FR	
Greenville, ME 04441	*	West Farmington, ME 04992	•	

#### THIS FORM IS NOT A VALID PERMIT.

NO CONSTRUCTION ACTIVITIES MAY BEGIN PRIOR TO YOUR RECEIPT OF A PERMIT.
THE COMMISSION MAY REQUIRE ADDITIONAL INFORMATION NOT ENCOMPASSED IN THIS APPLICATION.

Before going through the time and expense of filing this application, it is strongly recommended that you schedule a meeting with the Commission's staff. Our staff can assist you with understanding the requirements of submitting a road construction permit application proposal for the Commission's review. A preapplication meeting and/or site visit may also reveal potential issues unique to your proposal that will need to be addressed as part of your application. Call the LUPC office that serves your area to schedule an appointment.

# ADDITIONAL INFORMATION ABOUT THE APPLICATION PROCESS

#### PRE-APPLICATION AND POST-PERMIT SERVICES

The LUPC staff encourages, and is available for, meetings and site visits before you submit your application, after you receive your permit, and/or after your project is complete. Our staff can assist you with understanding the applicable requirements of submitting a proposal for the Commission's review and determining how your project best fits your site and therefore help ensure your project can be permitted.

#### Pre-application meetings:

- Encourage information exchange about the proposed project early in the planning stages;
- Help the applicant understand the application process and responsibilities in that process;
- · Help to identify any environmental or other issues that may need to be addressed as part of the permit process; and
- Provide an opportunity to identify aspects of the proposal that may make the application unique or difficult to approve.

### Suggested materials to bring to the pre-application meeting:

- This application form (even if not yet completed)
- · Recent photos of the property
- Plan(s) with dimensions and setbacks of existing and proposed roads, trails and other structures.

#### Suggested discussion points during the pre-application meeting:

- What is the propose use of the proposed road or trail?
- Will the proposal involve any wetland or water crossings?
- Are there other questions you may have regarding this application form or process?

# Pre- and post-construction site visits:

- · Help highlight specific permit conditions;
- Enable the applicant and Commission staff to discuss any issues or new concerns which have arisen; and
- Assist the applicant in identifying the various physical features on the lot that are related to the Commission's development standards.

Note: While the pre-application meeting is extremely valuable for identifying issues or concerns early on, no decisions are made at these meetings and the thoughts expressed are not binding on the Commission or the applicant. The information presented at these meetings is very general, and the review is not substantive.

Call the LUPC office that serves your area to schedule an appointment.

### **HOW LONG WILL IT TAKE TO OBTAIN A PERMIT?**

A permit decision will be issued within 90 days of a complete application being received and accepted by the LUPC Staff. In many cases a permit decision will be made sooner, particularly on smaller projects that meet all the applicable standards. The 90 day time period will not start until a complete application with all required exhibits is submitted. The LUPC staff will contact you if the application is not complete and let you know what is still required to make it complete. Occasionally, more information is requested by a review agency, in which case, the application may need to be placed on hold until that information is provided.

#### WHAT IF MY PROPOSAL DOES NOT MEET THE CRITERIA FOR APPROVAL?

The LUPC staff will contact you prior to the 90 day deadline if it is determined that the proposal is not approvable. The LUPC staff will then work with you to determine your options and to recommend modifications to your application in order to make your project approvable. If you choose to make modifications to obtain approval, your application will be placed on-hold until an updated and complete application is submitted. If you choose to have your application denied by the Staff, you will have an opportunity to appeal that decision to the Commission at one of its regular monthly meetings; or to Superior Court, if the decision is made by the Commission.

#### ACCESSING THE PROJECT SITE FOR SITE EVALATION AND INSPECTION

Under 12 M.R.S.A, Section 685-C,8: "For the purposes of inspection and to ensure compliance with standards, orders and permits issued or adopted by the commission, authorized commission staff...may conduct investigations, examinations, tests, and site evaluations necessary to verify information presented to it and may obtain access to any lands and structures regulated pursuant to this chapter".

For some development projects, an application cannot be deemed complete until a site visit has been conducted by staff to verify information about a project. Further, in some cases staff will need the applicant or their designated agent to be present on site to provide information. As a general policy, when reasonably practicable, staff will notify property owners or their agent prior to visiting the property. Section 7 of the application, however, provides an opportunity to authorize staff, at the time you file your application, to fully access a project site. Due to our limited resources, this may increase the efficiency of the review of your application.

# DEFINITIONS AND REQUIREMENTS BY SUBDISTRICT

The following terms, definitions and requirements are excerpts from the Commission's Chapter 10, Land Use Districts and Standards that are referenced in this application. Chapter 10 can be found in its entirely online at <a href="https://www.maine.gov/dacf/lupc/">www.maine.gov/dacf/lupc/</a>.

#### LAND MANAGEMENT ROAD

A land management road is a route or track consisting of a bed of exposed mineral soil, gravel, or other surfacing material constructed for, or created by, the repeated passage of motorized vehicles and used primarily for agricultural or forest management activities, including associated log yards but not including skid trails, skid roads, and winter haul roads.

#### **NO PERMIT REQUIRED**

P-WL3

**NO PERMIT REQUIRED** subject to standards (or in accordance with Chapter 15 in Management Districts). M-GN, M-HP, M-NC, P-AL, P-FW (with FONS supplement), P-GP, P-GP2, P-RR, P-SL, P-WL1, P-WL2

**PERMIT REQUIRED** subject to the applicable requirements in Chapter 10, Sub-Chapter III.

D-CI, D-ES, D-GN, D-RS, D-RS2, D-RS3, P-AR, P-FP, P-MA P-RT, P-SG, P-UA

**PROHIBITED** 

D-MT, D-GN2, D-GN3

#### LEVEL A ROAD PROJECTS

A Level A road project is reconstruction within existing rights-of-way of public or private roads other than land management roads, and of railroads, excepting bridge replacements. Examples of such activities include, without limitation, culvert replacements, resurfacing, ditching, and bridge repair. When there is no existing layout of right-of-way, the right-of-way should be assumed to extend 33 feet on either side of the existing centerline.

#### NO PERMIT REQUIRED subject to standards.

D-CI, D-ES, D-GN, D-GN2, D-GN3, D-RS2, D-RS2, D-RS3, M-GN, M-HP, M-NC, P-AL, P-AR, P-FW, P-GP, P-RR, P-RT, P-SG, P-SL, P-UA, P-WL1, P-WL2, P-WL3

**PERMIT REQUIRED** subject to the applicable requirements in Chapter 10, Sub-Chapter III.

P-FP

#### **PROHIBITED**

D-MT

#### LEVEL B ROAD PROJECTS

A Level B road project is a minor relocations, and reconstructions, involving limited work outside of the existing right-of-way of public roads or private roads other than land management roads and of railroads; bridge reconstruction and minor relocations whether within or outside of existing right-of-way of such roads; "Minor relocations" as used herein may not exceed 300 feet in horizontal displacement of centerline. "Reconstruction" as used herein may involve widening of existing rights-of-way not to exceed 50 feet on either side.

### NO PERMIT REQUIRED subject to standards.

M-GN, M-NC

**PERMIT REQUIRED** subject to the applicable requirements in Chapter 10, Sub-Chapter III.

D-CI, D-ES, D-GN, D-GN2, D-GN3, D-RS, D-RS2, D-RS3, M-HP, P-FP, P-AL, P-AR, P-FW, P-GP, P-RR, P-RT\*, P-SG, P-SL, P-UA, P-WL1, P-WL2, P-WL3

(\*provided that such roads are set back as far as practicable from the normal high water mark and screened from the river by existing vegetation.)

#### **PROHIBITED**

D-MT

### LEVEL C ROAD PROJECTS

A Level C road project is construction of new roads, and relocations or reconstruction of existing roads, other than that involved in Level A or Level B road projects; such roads shall include both public and private roadways excluding land management roads.

**PERMIT REQUIRED** subject to the applicable requirements in Chapter 10, Sub-Chapter III. D-CI, D-ES, D-GN, D-GN2, D-GN3, D-RS, D-RS2, D-RS3, M-GN, P-AL, P-FP, P-GP, P-SG, P-SL

PERMIT REQUIRED BY SPECIAL EXCEPTION (see specific requirements for that subdistrict in Chapter 10). M-HP M-NC, P-AR, P-FW, P-MA, P-RR, P-RT, P-UA, P-WL1, P-WL2, P-WL3

#### **PROHIBITED**

D-MT, M-HP

#### **TRAILS**

A trail is route or path other than a roadway, and related facilities, developed and used primarily for recreational activities including but not limited to hiking, backpacking, cross-country skiing and snowmobiling, which passes through or occurs in a natural environment. Related facilities may include but not be limited to subsidiary paths, springs, view points, and unusual or exemplary natural features in the immediate proximity of the trail which are commonly used or enjoyed by the users of the trail.

**NO PERMIT REQUIRED** provided they are constructed and maintained so as to reasonably avoid sedimentation of water bodies.

D-ES, D-GN, D-GN2, D-GN3, D-RS, D-RS2, D-RS3, M-GN, M-HP, P-AR, P-FW, P-UA.

**NO PERMIT REQUIRED** provided that any associated vegetation clearing or filling and grading are in conformance with the standards of 10.27,B,1,b and c,2, and 4 and 10.27,F, and provided the trails are constructed and maintained so as to reasonably avoid sedimentation of water bodies.

P-AL, P-GP, P-RR, P-RT, P-SL, P-WL1, P-WL2, P-WL3.

**PERMIT REQUIRED** subject to the applicable requirements in Chapter 10, Sub-Chapter III. P-FP, P-MA, P-SG

**PROHIBITED** 

D-CI. D-MT

### **WATER CROSSINGS**

A water crossing is a roadway or trail crossing of any body of standing or flowing water (including in its frozen state) by means of a bridge, culvert, or other means.

Crossings of Minor Flowing Waters (mapped or unmapped P-SL2) Not applicable in the Management Districts

NO PERMIT REQUIRED subject to standards.

D-CI, D-ES, D-GN, D-GN2, D-GN3, D-RS, D-RS2, D-RS3, P-AL, P-FW, P-GP, P-RR\*, P-RT\*, P-SL2, P-WL1, P-WL2, P-WL3.

(\*UNLESS surrounded by a P-RR or P-RT subdistrict established to protect such waters)

**PERMIT REQUIRED** subject to the applicable requirements in Chapter 10, Sub-Chapter III.

P-AR, P-FP, P-MA, P-SG, P-UA, P-RR\*, P-RT\*

(\*Where surrounded by a P-RR or P-RT subdistrict established to protect such waters.)

**PROHIBITED** 

D-MT

Other Water Crossings (tidal waters, bodies of standing water, and major flowing waters) Not applicable in the Management Districts

PERMIT REQUIRED subject to the applicable requirements in Chapter 10, Sub-Chapter III.

D-CI, D-ES, D-GN, D-GN2, D-GN3, D-RS, D-RS2, D-RS3, P-AL, P-AR, P-FP, P-FW, P-GP, P-MA, P-RR, P-RT, P-SG, P-SL1, P-UA, P-WL1, P-WL2, P-WL3

**PROHIBITED** 

D-MT

For office use:			
	RP		\$
Tracking No.		Permit No.	Fee Received

# **Road Permit Application**

1. APPLICANT AND LANDOWNER INFORMATION Print the names and contact information of all persons or companies with right, title or interest in the property associated with this application OR the persons or companies with prior legal authority to represent the landowners in land use matters. Persons with "right, title or interest" are those listed on any deed, lease or sales contract for the property. If a designated agent without prior legal authority will be representing the applicant, see Question 14. Applicant Name(s)\* Daytime Phone FAX (if applicable) Name of Representative (if applicable) Email (if applicable) Address Town State Zip Code \*If the applicant(s) listed above is NOT the landowner, please complete the landowner information below and then explain on what legal authority you are able to apply for permits on the landowner's behalf: Submit as part of *Exhibit B*, authority from the landowner to represent them in all land use matters. Landowner Name(s) Daytime Phone FAX or Email (if applicable) Address Town State Zip Code 2. PROPERTY LOCATION AND PROPERTY DETAILS Township, Town or Plantation(s) County Tax Information (check tax bill) Type of Ownership Lot Size (in acres, or in square feet if less than 1 acre) Map: Plan: Lot: ☐ Owned ☐ Easement Plan: Lot: ☐ Lease ☐ Right-of-way (ROW) Map: ☐ Other Map: Plan: Lot: All Zoning within 500 feet of the Project Site (check the LUPC map) Zoning at Project Site Nearest Roadway **Nearest Waterbody** 3. ACCESS TO THE PROJECT SITE If YES, attach any legal restrictions as part of Exhibit B and explain the limitations below: b. Are you constructing a road or trail entrance or changing a current entrance in a way that will increase traffic volume, or create a safety or drainage concern regarding a State or State-Aid Highway? If YES, you must submit Exhibit L: Entrance Permit. Note: If your property is located along a County or Town/Plantation Road, you should check with that office before submitting this application to see what is required. 4. EXISTING USES AND DEVELOPMENT Previous permit(s) (if applicable) a. What is the current use of the project site? Residential Commercial /Industrial Undeveloped/Forested Other b. If the project site currently developed, please briefly describe the existing development.

# 5. PROJECT DESCRIPTION

Explain, in detail, the activity which you are proposing, the purpose of the project, and why the project is needed. Example: Construct 2 miles of 14 ft. wide logging road with gravel travel surface to access timber harvest area within a P-RR subdistrict; or construct 4 miles of 20 foot wide road with bituminous travel surface for public access to subdivision and recreation area. (Attach additional 8 1/2" by 11" paper if necessary.)

a. Project Type - See Instructions page i for definitions (check all that a Land Management Road Private Driveway(>1,000' lon Level A Road Construction Subdivision or Development Change of Use (Explain):  Other (Explain):	ng)	on Driveway Road Cons	(serving more than 2 lots) struction
Type of Use:  Public Private Otherwise Restricted (Explain	in)		
Road Name (if applicable):	ate of Original Construction (	if applicable	e)
Total Length (feet/miles)  Travel width (feet)  Right-of-way width (feet)	verage sustained grade (%)		Maximum sustained grade (%)
Type of wearing surface Depth of wearing surface (inches)	Type of Base Material		Depth of Base (feet/inches)
b. Road Setbacks & Slope (feet) Distance (feet) Average slope(%) between road and nearest waterbody	c. Other Road Features	Number of	Average width x length
	Turnouts		
	Turnarounds		
	Parking Areas* Other Cleared Areas		
	r Stream Wetland	Roa	ad Property Line
d. General Road Standards: (for all roads) Will the road be constructed in accordance with the standards of Section 1 If NO, identify which standard(s) would not be met, briefly explain why, and manner which produces no undue adverse impact upon the resources and Will the road be constructed in accordance with the applicable standards of If NO, identify which standard(s) would not be met, briefly explain why, and manner which will meet the development needs and will not cause erosion  7. WATER AND WETLAND CROSSINGS	d explain how the road will be duses in the area.  In and Development Access In the front of Section 10.27,D?	e constructe	□NA □YES □NO
Will the proposed road and/or trail cross any rivers, streams, brooks, wetlands	s or other waterhodies?		□VEQ □NO
If NO, continue to Question 8; If YES, please answer the following questions.			
·	☐ Box Culvert ☐ Arch	Culvert	☐ Bridge
b. Will any water crossings include crossings of Atlantic salmon habitat water	ersheds?		□YFS □NO
If YES, you should contact the Department of Marine Resources, Bureau mail at Department of Marine Resources 172 State House Station, Augus	u of Sea-Run Fisheries and H	abitat by ph	one at (207) 287-9972 or by

Question 7 is continued on the next page...

7.	WATER AND WETLAN	D CROSSINGS (continu	ed from previous page)		,	<b>J</b>			
C.	Will all water and wetland crossings be constructed in accordance with the standards of Section 10.27,D?								
	If NO, explain how the crossing will be constructed in a manner which produces no undue adverse impact upon the resources and uses in the area.								
	Districts and Standar complete a Bridge Complete	or flowing waters, water crords, and other water crossionstruction Permit Applica Application. You need onl	ings which require a pe	ermit in the Subdistrict (i.this application. The Co	e., P-RR	or P-FP),	you sho	uld also	
8.	PROPOSED TEMPORA	RY BUILDINGS AND/C	OR OFFICES						
a.	Are you proposing to const (Note: Permanent structure	es may require a separate	Development Permit)						□NO
	If NO, continue to Question	• •	• .						
b.	Describe the proposed buil	dings by completing the fo	llowing table. (Fill in a	line for each proposed build				<b>f</b>	
		Duration	Dimensions (in feet)	Type of foundation		e (in feet)			
T	ype of temporary building	(length of time buildings to remain at the site)	of building (LxWxH)	(wheels, skids, slab, post, etc.)	Property line	Lake or pond	River or stream	Wetland	Ocean
			16 11111						
C.	Will any of the above structu  If YES, you may need to sub					rt-a-potti	es	∐YES	∐NO
d.	Describe any site preparatio		·	,	,	and equ	ipment.		
٠.	December any one proparation	Transit viiii bo roquii ou, irroi	daning anoradono in oro	ior to provide access for	materiale	, and oqu	ipinoni.		
e.	Describe how solid waste, in	cluding demolition debris,	stumps, or constructio	n debris, will be dispose	d of prop	erly in ac	cordance	with Sta	te
	Laws.								
9.	ALTERING LAND AND V	VETLAND ALTERATIO	N (Note: Supplement o	or Exhibit may be require	ed. See I	nstruction	ns.)		
a.	Will your proposal alter a tot	al of one acre or more of la	and area, whether upla	nd or wetland?				□YES	□NO
	If YES, you must also completor Wetland Alterations.		•						
b.	Will your proposal alter any a mark of any lake, pond, river							□YES	□NO
	If YES, you must also complete <b>Supplement S-3:</b> Requirements for Wetland Alterations. Contact the LUPC office that serves your area or download at <a href="https://www.maine.gov/dact/lupc/application_forms/index.shtml">www.maine.gov/dact/lupc/application_forms/index.shtml</a> .								

# 10. DEVELOPMENT IN FLOOD PRONE AREAS (Note: Supplement may be required. See Instructions.) Is your proposed activity located within a mapped P-FP (Flood Prone Area P-FP Subdistrict YES NO Protection) Subdistrict, a mapped FEMA (Federal Emergency Management Agency) flood zone, or an unmapped area prone to flooding? If you are unsure whether your property is in a mapped Flood Prone Area Protection Subdistrict or a mapped FEMA flood zone, check Appendix E of the Commission's Land Use Districts and Standards (www.maine.gov/dacf/lupc/laws\_rules/rule\_chapters/Ch10\_Appendix.pdf); check FEMA's map service center (https://msc.fema.gov/portal); or contact the LUPC office that serves your area. If YES, you must complete Supplement S-4: Development in Flood Prone Areas. Contact the LUPC office that serves your area or download at www.maine.gov/dacf/lupc/application forms/index.shtml. 11. IMPACTS ON EXISTING USES AND RESOURCES a. What are the existing uses and resources (e.g., commercial forest, deer wintering area, farm land, seasonal residential use, year round residential use, commercial uses, public trails, etc.) of the area surrounding your proposed project site? Please be as specific as possible. b. Describe the anticipated impact of the proposed project on existing uses and resources in the vicinity of the project. Consideration should be given particularly to impacts on existing recreational uses, visibility from residential uses, populated or developed areas, water bodies and roads used by the public. (Attach additional 8 1/2" by 11" paper if necessary) c. Will be roadway be visible from any public roads, trails or waterbodies? If so, how will the roadways be designed to minimize its visible and protect scenic vistas? d. How will the roadway be designed, constructed and maintained so as to protect any existing wells, sewage disposal systems, and structures in the vicinity of the project? (For example, chemicals for dust control or de-icing will not be used near wells; Road runoff and drainage will be diverted away from wells, sewage disposal systems and structures to avoid contamination and damage; the road will be set back more than 100 feet from any existing wells). If YES, submit Exhibit J, Blasting Plan in accordance with M.R.S.A. 38 Chapter 3, Subsection 490-Z. (Note: Use of explosives to blast bedrock or boulders should also be avoided near wells, sewage disposal systems and structures). f. Describe what type(s) and volume of traffic your proposed project is anticipated to generate and/or serve both during and upon completion of proposed construction activities? **During Construction:** After Construction: g. State the anticipated weekly hours of construction and the anticipated noise levels at the nearest property line.

Maine Land Use Planning Commission (ver. 06/2015)

# 12. SEDIMENTATION AND EROSION CONTROL

	If responses to any part of Question 12 are provided as part of your site plans, please indicate "see site plans" as and where applicable. However, please be sure that answers are provided in either location to all parts of these questions.
١.	What is the anticipated starting date of the project? and estimated completion date
	Describe any site preparation that will be required, including access for materials and equipment.
<b>.</b>	Provide a detailed description of temporary and permanent sedimentation and erosion control measures you propose to protect the project site and the area surrounding your project, both during and after construction. (Attach additional 8 1/2" by 11" paper if necessary.)
1.	Provide a detailed description of all temporary and permanent provisions for drainage including culverts, water bars, drainage ditches, settling basins, etc., and provisions for the continued maintenance of these structures. (Attach additional 8 1/2" by 11" paper if necessary.)  Note: calculations, formulas and factors used to determine the sizing of drainage structures may be requested if needed.
).	How will the roadways be designed to minimize the use of ditching, cuts and fills.
	What site-specific best management practices will be used to ensure that existing and proposed roadways do not create erosion or safety problems? Include a description of any measures proposed to be used if road construction will be conducted during saturated or frozen conditions.
١.	If the proposed road or trail is anticipated to be closed out or put to bed at a later date, explain when, and how it will be closed out.
١.	Will the road or trail will be dedicated to, or maintenance otherwise assumed by, a town, plantation, county or other government entity?
	What provisions will be made for continued maintenance of any proposed roadways and/or trails?

# 13. ADDITIONAL INFORMATION

State any additional facts regarding this application that you feel may furth application. (Attach additional 8 1/2" by 11" paper if necessary.)	ner explain your proposa	al or assist the Commis	ssion in its review of your
14. APPLICANT SIGNATURE (REQUIRED) AND AGENT AUTHO	ORIZATION (OPTION	IAL)	
If you have a designated agent, print his/her legal name and contact inforr realtors, attorneys, or contractors). If you have a designated agent, provide			ne applicant's behalf (such as
Agent Name	Daytime Phone	FAX (if applicable)	
Mailing Address	1	Email (if applicable	e)
Town		State	Zip Code
I have personally examined and am familiar with the information submitted and to the best of my knowledge and belief, this application is complete w or without any required exhibits that it will result in delays in processing marrative and depiction of what currently exists on and what is proposed a conditions to any contractors working on my project. I understand that I a with all conditions and limitations of any permits issued to me by the LUPC business to act as my legal agent in all matters relating to this permit appli	ith all necessary exhibit y permit decision. The t the property. I certify m ultimately responsible C. If there is an Agent li	s. I understand that if information in this applethat I will give a copy one for complying with all	the application is incomplete ication is a true and adequate f this permit and associated applicable regulations and
Please check one of the boxes below: (see "Accessing the Project Site for I authorize staff of the Land Use Planning Commission to access the pevaluating the site to verify the application materials I have submitted, regulatory requirements, and the terms and conditions of my permit.	roject site as necessary	at any reasonable ho	ur for the purpose of
☐ I request that staff of the Land Use Planning Commission make reason access the project site for purposes of any necessary site evaluation a			n my permission to fully
Caution: The person(s) signing below must demonstrate that they ha holder, or via a legal agreement or other written contract with the lan			ner as the landowner, lease
Signature(s)	Da	te	
	Da	te	

# CHECKLIST OF REQUIRED FEES, EXHIBITS, AND SUPPLEMENTS

Please check off the following for the application fee, exhibits, and supplements. To determine which exhibits are required for your application, use the highlighted notes () contained in certain questions and the instructions in Required Fees, Exhibits and Supplements. Please check if the exhibit is required and if it has been provided, and note that the supplements may also require additional exhibits. Please check with Commission staff if you have any questions.

Required* YES NO		ovided Exhibit		*Required
			Application Fee	Required unless a waiver is granted by the LUPC Director in very specific and limited circumstances.
			Exhibit A – Location Map and Directions to Site	Required.
			Exhibit B – Deed, Lease or Sales Contract for landowner, any legal restrictions on the property and a Legal Agreement with Landowner(s) if applicant is not the landowner	Required, if not already on file with the Commission
			Exhibit C – Corporate Good Standing	Required if landowner is a Corporation.
			Exhibit D – Technical Experience and Ability	Required.
			Exhibit E-1 – Proposed Site Plan	Required. Show all existing structures and features.
			Exhibit E-2 – Cross Section	Required.
			Exhibit E-3 – Road Profile	Required.
			Exhibit F – Class L Soil Survey	Required.
			Exhibit G – Water Supply and Plumbing Facilities	Required if you answer YES to Question 8.c.
			Exhibit H – Financial Capacity	Required.
			Exhibit I – Erosion and Sedimentation Control Plan	Required if plan to alter, disturb or fill a total of one acre or more of land, whether upland or wetland or if disturbance will occur when the ground is frozen or saturated.
			Exhibit J – Blasting Plan	Required if you answer YES to Question 11.d.
			Exhibit K – Contract for Road or Trail Maintenance	Required if you answer YES to Question 12.h.
			Exhibit L – Entrance Permit	Required if you propose to construct a road or trail entrance or change an existing entrance in a way that will increase traffic volume, or create a safety or drainage concern regarding a State or State Aid Roadway or if required by the County, Town or Plantation.
			Exhibit M – Notice of Filing	Required.
			Bridge Construction Permit Application	Required if also constructing a water crossing over a Major Flowing Water or a within subdistrict which requires a permit for other water crossings (such as a P-RR or P-FP).
			Supplement S-3: Requirements for Wetland Alterations .	Required if you answer YES to either Question 9.a or 9.b.
			Supplement S-4: Requirements for Development in Flood Prone Areas	Required if you answer YES to any part of Question 10.

# REQUIRED FEES AND EXHIBITS

Because your Road Construction Permit Application cannot be considered complete until all necessary exhibits have been submitted and found to be complete, please read the description of what is required for each of the exhibits carefully. Incomplete or inadequate applications and exhibits may be returned. If you do not fully understand what is being asked in a question or exhibit, or you have guestions, please contact the LUPC staff for assistance.

Each exhibit must be clearly identified with the applicant's name and the exhibit letter and/or identification (i.e., EXHIBIT E, SITE PLANS) included on each page. All plans must be drawn to scale and that scale clearly identified. All exhibits must be clear and in ink. Pencil notes and drawings, very light copies of materials, and drawings and notes on onion skin paper are not acceptable and may be returned. Plans must not exceed 24 inches by 36 inches in size. If more than one sheet is required, match lines must be included on each sheet.

Any exhibits larger than 8 1/2" by 11", exclusive of Land Use Guidance Maps and deeds, must be submitted in eight copies, each folded to 8 1/2" by 11". In some instances, the LUPC staff may request that you provide additional copies of the entire application. It is also recommended that you submit electronic copies of the application on Compact Disk, which may reduce the number of required paper copies. It may save time if you discuss your application with the staff prior to formal submission. They should be able to advise how many extra copies should be included.

APPLICATION FEE (nonrefundable). Submit a check or money order payable to "Treasurer, State of Maine" for the appropriate fee: Base Fee of \$200, PLUS:

- \$0.10 per linear foot for Level A Projects; \$1,000.00 Maximum Fee for Level A Projects
- \$0.15 per linear foot for Level B Projects; \$2,500.00 Maximum Fee for Level B Projects
- \$0.30 per linear foot for Level C Projects; \$5,000.00 Maximum Fee for Level C Projects
- \$0.30 per linear foot for Level C Projects; \$5,000.00 Maximum Fee for Level C Projects
- \$0.15 per linear foot for Land Management Roads; \$1,000.00 Maximum Fee for Land Management Roads

After-the-fact Permit Fees are triple the standard fee.

#### **EXHIBIT A: LOCATION MAP AND DIRECTIONS TO SITE**

Submit, as EXHIBIT A, a copy of a Land Use Guidance Map, a U.S.G.S. Topographic, or equivalent map on which you have clearly marked the location of the project site. Mark the project site location with an X, then draw a circle around the X and then an arrow which points to your lot.

Land Use Guidance Maps are available for all towns, townships and plantations under the Commission's jurisdiction. If you did not receive one of these maps with your application, copies are available, upon request, from the Commission's offices. There is no charge for these maps when associated with an application.

You must also provide specific directions to the proposed development site. These directions should be typed or printed on a separate 8 ½" by 11" sheet of paper and attached to the location map. The directions should provide enough detail so that someone from the Commission can locate the site.

#### **EXHIBIT B: RIGHT, TITLE OR INTEREST**

Submit, as EXHIBIT B, a complete, signed copies of all deeds, leases, and other covenants, restrictions or easements or agreements that demonstrate the landowner's title, right or interest in all of the land addressed in this application, and any agreements authorizing the applicant (if not the land owner to apply on the landowner's behalf. (DO NOT SEND THE ORIGINAL) Or submit a current binding option to purchase all necessary interest in the land, or a similar contractual agreement that establishes terms for future title and provides a description of the property. If you are submitting a contractual agreement, you must also submit complete, signed copies of all deeds or leases that demonstrate the current land owner's title, right or interest in all of the land addressed in this application.

If you are leasing your property, read your lease carefully and contact the lessor before submitting this application to the LUPC. You may need to get written permission from the lessor for your proposal first.

#### **EXHIBIT C: CORPORATE GOOD STANDING**

If the applicant is a corporation, submit, as EXHIBIT C, a certification of corporate good standing from the Secretary of State, State of Maine. Certification of good standing can be requested at: https://icrs.informe.org/nei-sos-icrs/ICRS?MainPage=x or by contacting the Bureau's Reporting and Information Section at (207) 624-7752.

#### **EXHIBIT D: TECHNICAL EXPERIENCE AND ABILITY**

Submit, as EXHIBIT D, information which demonstrates your technical experience and abilities and/or those of the contractor who will actually undertake and complete the proposed project. Such information should include, but not be limited to a statement of the applicant's and/or the contractor's prior experience and appropriate training relating to the nature of the proposed development and a description of professional qualifications of personnel who will be employed to design, install and oversee the proposed development, including stabilization and erosion control measures.

#### **EXHIBIT E: SITE PLANS**

Submit, as EXHIBIT E, **three** separate site plans showing what the site will look like when the project is completed. These drawings must each be drawn to the same scale, and must include an accurate overhead view of the entire project area, a typical road profile and a typical cross section of the proposed road or trail. The overhead view must also include the locations of any associated structures and facilities.

The **overhead view** (EXHIBIT E-1) should clearly show the proposed travel width of the road or trail, width of road shoulders, width of ditches, right of way width and center line of the road or trail.

The **cross section view** (EXHIBIT E-2) should show the road or trail travel surface, location and materials of original ground surface, depth and type of fill to be used, slopes, drainage ditches, and any other water control devices, and boundaries of the travel surface, shoulders and rights of ways.

The **road profile** (EXHIBIT E-3) should show the road or trail elevation, the elevation of the original ground surface, and the percent grade of slope of the final road from the center line of the entire length of road or trail.

All site plans should clearly identify the applicable scale and should include the applicant's name and mailing address. Do not use colors as they do not photocopy. If symbols are used in preparing your site plans, such plans must include a key to all symbols with such key located in the lower left corner of each plan.

#### **EXHIBIT F: CLASS L SOIL SURVEY**

Submit, as EXHIBIT F, a Class L soils survey properly conducted by a soil scientist in accordance with the Guidelines for Maine Certified Soil Scientists for Soil Identification and Mapping (Maine Association of Professional Soil Scientists, 2009) demonstrating that the proposed development will take place on soils which are suitable for all proposed road construction and associated structures and facilities.

Determination of soil suitability shall be based on the Natural Resources Conservation Service's soils potential rating for low density development. Soils with a low or very low development potential rating shall not be developed unless the Commission determines that adequate corrective measures will be used to overcome those limitations that resulted in a low or very low rating.

The Commission may waive one or more of the provisions of a Class L Soil Survey, including but not limited to the contour mapping requirement, where such provision is considered by the Commission unnecessary for its review.

#### **EXHIBIT G: WATER SUPPLY AND/OR PLUMBING FACILITIES**

If you propose to construct or install any structures with water and/or plumbing facilities, you must hire a licensed site evaluator to test your soils and design a sewage disposal system, including sink drains and pit privies. You must then submit, as EXHIBIT G, the HHE 200 APPLICATION FOR SUBSURFACE WASTE WATER DISPOSAL as completed by your site evaluator. If you anticipate installation of a sink drain and a pit privy, a minimum of two soils tests must be conducted and reported; one for the sink drain location and one for the privy location. Alternatively, if you propose to only install temporary Port-a-potties, you must provide the name of the company that would be servicing them.

#### **EXHIBIT H: FINANCIAL CAPABILITY**

MAINE LAND USE PLANNING COMMISSION

Applications for Road Construction Permits must include evidence which demonstrates that the applicant has the financial capability to undertake the proposed development. To demonstrate financial capability to undertake the proposed development you must submit, as EXHIBIT H, at least one of the following:

- A letter from a financial institution, governmental agency or other funding agency indicating a commitment to provide a specified amount of funds and the uses for which those funds may be utilized;
- In cases where funding is required but there can be no commitment of money until approvals have been received, submit a Letter of Intent to Fund from the appropriate funding institution indicating the amount of funds available and their specified uses;
- The most recent corporate annual report indicating availability of sufficient funds to finance the proposed development together with
  explanatory materials which interpret the report; and/or if the applicant will personally finance the proposed development, copies of bank
  statements or other evidence indicating availability of funds necessary to complete the development.
- If the applicant is a governmental agency, or agents thereof, indicate the source of funding (e.g., town revenue, bond, grant, etc).

Road Permit Application

#### **EXHIBIT I: EROSION AND SEDIMENTATION CONTROL PLANS**

Submit, as EXHIBIT I, a comprehensive drainage and erosion control plan which includes a construction schedule, construction methods and a sequence of construction activities, including reclamation of the project site. Such plan must also demonstrate that adequate provision will be made to control drainage, sedimentation and erosion before during and after road construction. This plan should show all existing and proposed on-site drainage and erosion control measures and sequences of installation, including any temporary facilities designed to convey water around, through or from the construction site. This comprehensive drainage and erosion control plan must incorporate soil types identified on the medium intensity mapping required as EXHIBIT F, and note any special provisions or considerations required based upon those soils types and conditions.

If you plan to install bridges, culverts or other methods of water crossings, either temporary or permanent, you must include calculations and factors used in determining the sizing of each of these facilities, and stabilization and erosion control measures to be undertaken both during and after construction. For crossings of major flowing waters or other water crossings which do not meet the Standards of Section 10.27,D, it may be necessary that you also complete a Bridge Construction Permit Application and submit it with this application. The Commission will review both as one application. You need only submit one application fee.

If you propose the use of temporary drainage facilities, you must provide a detailed description of those facilities, including the timing and sequence of their use, provisions for removal and stabilization and erosion control measures both during and after their use.

You must provide measures to be taken during road construction activities to assure that unreasonable sedimentation and erosion of exposed mineral soil and fill will not take place. You must also provide provisions for stabilization of cut and fill banks to avoid unreasonable slumping, washing or erosion of the banks.

You must also include a proposed program for the maintenance of all drainage, water crossing and erosion and sedimentation control facilities which will remain after road and water crossing construction has been completed and designation of a person who will be responsible for continued maintenance.

#### **EXHIBIT J: BLASTING PLAN**

If explosive devices will be used as part of the road construction project, you must submit, as EXHIBIT J, a blasting plan that meets the requirements under 38 M.R.S.A. Subsection 490-Z. This may include a pre-blast survey and will require that certain data be recorded for each blast.

#### **EXHIBIT K: CONTRACT FOR ROAD OR TRAIL MAINTENANCE**

If the road or trail will be dedicated to, or maintenance otherwise assumed by a government entity, you must submit, as EXHIBIT K, a letter from that entity confirming that the proposed development is designed in compliance with their standards (if applicable) and confirming the entity's capacity to provide the necessary maintenance.

#### **EXHIBIT L: ENTRANCE PERMIT**

If you are proposing to construct a road or trail entrance regarding a state or state-aid road, or if you are proposing to increase traffic volume or potentially create a safety or drainage concern, you must obtain a Driveway/Entrance Permit from the Maine Department of Transportation (MDOT) and submit it with your application. For more information, contact the regional MDOT office that serves your area or go to the Department's website at www.maine.gov/mdot/. In addition, if a permit is required for new entrances off of County, Town or Plantation roads in your area, you must obtain this permit and submit it with your application. Please contact your County Commissioners' office or Town/Plantation office for information on what is required.

#### **EXHIBIT M: NOTICE OF FILING**

Within the same week that this application is filed with the Commission, you must provide by regular mail a completed copy of the attached Notice of Filing Form to the following persons: (1) all persons owning or leasing property abutting or within 1.000 feet of the property to be rezoned; (2) plantation assessors or town selectboard; and (3) county commissioners. The written notice must either be provided using the attached form or contain the information, exactly as stated on the attached form.

Submit to the Commission a copy of the written notice that was sent and a complete listing of all persons to whom notice was provided (including names and mailing addresses) and the date such notice was provided.

IMPORTANT: Additional notice requirements will apply where the LUPC Director deems the petition to be of general public interest due to their nature, location, or size (Chapter 4, Section 4.05,(4)(c)). Contact the LUPC office that serves your area to determine whether these additional requirements apply to your petition.

Note: Names and addresses of abutting property owners are available from town and plantation public officials or, in unorganized townships, from the Maine Revenue Service at (207) 624-5611 or at www.maine.gov/revenue/.

The LUPC may require that the applicant publish a completed copy of the notice in the legal ad section of a newspaper circulated in the project area. You are not required to publish the notice unless the LUPC staff notifies you to do so.

#### SUPPLEMENT S-3: REQUIREMENTS FOR WETLAND ALTERATIONS.

If you answer YES to either of the wetland questions (see question 9 of this application), you must submit this supplement with your LUPC permit application. You may be required to hire a qualified professional to delineate wetlands within your project area. Contact the LUPC office that serves your area for additional information and to obtain a copy of this supplement or go to <a href="https://www.maine.gov/dacf/lupc/application">www.maine.gov/dacf/lupc/application</a> forms/index.shtml.

Alteration means removing or displacing soil, sand, vegetation or other material; dredging; bulldozing; draining or dewatering; filling; or any other construction, repair or alteration of an permanent structure. P-WL Subdistricts (Wetlands) include lakes, ponds, rivers, streams, bogs, marshes, intertidal areas and other types of wetlands identified on the LUPC's Land Use Guidance Map. Mapped wetlands usually show on the maps as three types: P-WL1, P-WL2, or P-WL3 subdistricts. However, small and intermittent streams are also considered P-WL subdistricts, even if they are not shown on the LUPC's maps.

#### SUPPLEMENT S-4: REQUIREMENTS FOR DEVELOPMENT IN FLOOD PRONE AREAS.

If you answer YES to question 10 of this application, you must submit this supplement with your LUPC permit application. You may be required to hire a qualified land surveyor, architect, or professional engineer to determine the elevation of your property or of a proposed or an existing structure. Contact the LUPC office that serves your area for additional information and to obtain a copy of this supplement or go to <a href="https://www.maine.gov/dacf/lupc/application\_forms/index.shtml">www.maine.gov/dacf/lupc/application\_forms/index.shtml</a>.

If you are unsure whether your property is in a mapped Flood Prone Area Protection Subdistrict or a mapped FEMA flood zone, check Appendix E of the Commission's Land Use Districts and Standards

(<a href="www.maine.gov/dacf/lupc/laws\_rules/rule\_chapters/Ch10\_Appendix.pdf">www.maine.gov/dacf/lupc/laws\_rules/rule\_chapters/Ch10\_Appendix.pdf</a>); check FEMA's map service center (<a href="https://msc.fema.gov/portal">https://msc.fema.gov/portal</a>); or contact <a href="mailto:the LUPC office that serves your area">the LUPC office that serves your area</a>.

### **EXHIBIT M**

# NOTICE OF FILING OF ROAD CONSTRUCTION PERMIT APPLICATION WITH THE MAINE LAND USE PLANNING COMMISSION

At the time a road construction permit application is filed with the Maine Land Use Planning Commission, the applicant must send by regular mail a completed copy of this notice to: all persons owning or leasing property abutting or within 1,000 feet of the property; plantation assessors or town selectboard; and county commissioners.

This is to notify you that	
This is to homy you mut	(name of applicant)
	(address of applicant)
has filed an application for a Road C 12 M.R.S.A. §685-B, to	Construction Permit with the Maine Land Use Planning Commission, pursuant to provisions of
	(describe in detail the proposal and how much land is involved)
located in	
	(name of town, township or plantation, and county)
The application will be filed for publication of the appropriate office) on	c inspection at the Maine Land Use Planning Commission office circled below (circle the
	(the date that this application will be filed with the LUPC)

AUGUSTA	OFFICE	ASHLANI	O OFFICE	
		Serving most of Aroostook County, and portions of northern		
		Penobscot and Pis	scataquis Counties	
18 Elkins Lane - Harlow Bldg.	Tel. (207) 287-2631	45 Radar Road	Tel. (207) 435-7963	
22 State House Station	FAX (207) 287-7439	Ashland, ME 04732-3600	FAX (207) 435-7184	
Augusta, ME 04333-0022				
BANGOR (	OFFICE .	EAST MILLING	OCKET OFFICE	
Serving Hancock, Kennebec, Knox,	Lincoln, Sagadahoc, and Waldo	Serving southern Penobscot and	Aroostook Counties, and portions	
Counties; most of Washington Coun	ity; and all coastal islands in the	of Piscataquis and northern Washington Counties		
LUPC servi	ce area			
106 Hogan Rd, Suite 8	Tel. (207) 941-4052	191 Main Street	Tel. (207) 746-2244	
Bangor, ME 04401	FAX (207) 941-4222	East Millinocket, ME 04430	Tel. (207) 731-4398	
_			FAX (207) 746-2243	
GREENVILLE	OFFICE	WEST FARMIN	IGTON OFFICE	
Serving Somerset County and I	most of Piscataquis County	Serving Franklin and Oxford Counties		
43 Lakeview Street	Tel. (207) 695-2466	133 Fyfe Rd	Tel. (207) 670-7492 OX	
P.O. Box 1107	FAX (207) 695-2380	P.O. Box 307	Tel. (207) 670-7493 FR	
Greenville, ME 04441		West Farmington, ME 04992		

Written comments from interested persons should be sent to the Maine Land Use Planning Commission address circled above and **must be received by the Commission in a timely manner**.

Requests for a public hearing must be submitted in writing and **must be received by the Commission in a timely manner**. Requests for a public hearing must clearly state the reasons for why a public hearing is warranted on this project.

For information on how to request a public hearing or for additional information, contact the Maine Land Use Planning Commission staff at the office circled above.

# **ROAD AND WATER CROSSING STANDARDS (Section 10.27,D)**

The following road and water crossing requirements shall apply in P-WL1, P-WL2, P-SL, P-FP, P-GP subdistricts and all development subdistricts: A permit is required to exceed these standards.

- 1. ROAD CONSTRUCTION AND MAINTENANCE: The following requirements shall apply to construction and maintenance of roads:
- **a.** All cut or fill banks and areas of exposed mineral soil outside the roadbed within 75 feet of a flowing water, body of standing water, tidal water, or a wetland shall be revegetated or otherwise stabilized so as to prevent erosion and sedimentation of water bodies or wetlands;
- b. Road banks shall have a slope no steeper than 2 horizontal to 1 vertical:
- c. Drainage ditches shall be provided so as to effectively control water entering and leaving the road area. Such drainage ditches will be properly stabilized so that the potential for unreasonable erosion does not exist:
- d. In order to prevent road surface drainage from directly entering water bodies or wetlands, road and their associated drainage, ditches shall be located, constructed, and maintained so as to provided an unscarified filter strip, of at least the width indicated to the right, between the exposed mineral soil of the road and the normal high water mark of a surface water body or upland edge of a wetland:

Average Slope of Land Between Exposed Mineral Soil and Normal High Water Mark (percent)	Width of Strip Between Exposed Mineral Soil and Normal High Water Mark (in feet along surface of the ground)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165

Table 10.27,D-1. Unscarified filter strip width requirements for exposed mineral soil created by roads and their associated drainage ditches. This requirement shall not apply to road approaches to water crossings or wetlands.

Road Grade

(Percent)

- e. Drainage ditches for roads approaching a water crossing or wetland shall be designed, constructed, and maintained to empty into an unscarified filter strip, of at least the width indicated in the table set forth in Section 10.27,D,1,d above, between the outflow point of the ditch and the normal high water mark of the water or the upland edge of a wetland. Where such filter strip is impracticable, appropriate techniques shall be used to reasonably avoid sedimentation of the water body or wetland. Such techniques may include the installation of sump holes or settling basins, and/or the effective use of additional ditch relief culverts and ditch water turnouts placed so as to reasonably avoid sedimentation of the water body or wetland;
- **f.** Ditch relief (cross drainage) culverts, drainage dips and water turnouts will be installed in a manner effective in getting drainage onto unscarified filter strips before the flow in the road or its drainage ditches gains sufficient volume or head to erode the road or ditch.
  - (1) Drainage dips may be used in place of ditch relief culverts only where the road grade is 10% or less;
  - (2) On roads having slopes greater than 10%, ditch relief culverts shall be placed across the road at approximately a 30 degree angle downslope from a line perpendicular to the center line of the road;
  - (3) Ditch relief culverts, drainage dips and water turnouts shall direct drainage onto unscarified filter strips as required in Section 10.27,D,1,d and e above;
  - (4) Ditch relief culverts shall be sufficiently sized and properly installed in order to allow for effective functioning, and their inlet and outlet ends shall be stabilized with appropriate materials; and
- e 0-2 500-300 3-5 250-180 6-10 167-140 11-15 136-127 16-20 125-120 21+ 100

Spacing

(Feet)

- Table 10.27,D-2. Spacing requirements for drainage dips and associated water turnouts.
- (5) Ditch relief culverts, drainage dips and associated water turnouts shall be spaced along the road at intervals no greater than indicated in the <u>table to the right</u>:
- 2. WATER CROSSINGS: The following requirements shall apply to water crossings when surface waters are unfrozen:
- **a.** Bridges and culverts shall be installed and maintained to provide an opening sufficient in size and structure to accommodate 10 year frequency water flows or with a cross-sectional area at least equal to 2 ½ times the cross-sectional area of the stream channel.
- **b.** Culvert and bridge sizes may be smaller than provided in Section 10.27,D,2,a if techniques are employed such that in the event of culvert or bridge failure, the natural course of water flow is reasonably maintained and sedimentation of the water body is reasonably avoided; such techniques may include, but are not limited to, the effective use of any or all of the following:
  - (1) Removing culverts prior to the onset of frozen ground conditions;
  - (2) Using water bars in conjunction with culverts; or
  - (3) Using road dips in conjunction with culverts.
- c. Culverts utilized in water crossings shall:
  - (1) Be installed at or below stream bed elevation;
  - (2) Be seated on firm ground;

- (3) Have soil compacted at least halfway up the side of the culvert;
- (4) Be covered by soil to a minimum depth of 1 foot or according to the culvert manufacturer's specifications, whichever is greater; and
- (5) Have a headwall at the inlet end which is adequately stabilized by rip-rap or other suitable means to reasonably avoid erosion of material around the culvert.

#### 3. DESIGN AND CONSTRUCTION OF LAND MANAGEMENT ROADS SYSTEM THROUGH WETLANDS

The design and construction of land management road systems through wetlands, other than those areas below the normal high water mark of standing or flowing waters, must avoid wetlands unless there are no reasonable alternatives, and must maintain the existing hydrology of wetlands. To maintain the existing hydrology of wetlands, road drainage designs shall provide cross drainage of the water on the surface and in the top 12 inches of soil in wetlands during both flooded and low water conditions so as to neither create permanent changes in wetland water levels nor alter wetland drainage patterns. This shall be accomplished through the incorporation of culverts or porous layers at appropriate levels in the road fill to pass water at its normal level through the road corridor. Where culverts or other cross-drainage structures are not used, all fills shall consist of free draining granular material. To accomplish the above, the following requirements apply:

#### a. Road construction on mineral soils or those with surface organic layers up to 4 feet in thickness.

- (1) Fill may be placed directly on the organic surface compressing or displacing the organic material until equilibrium is reached. With this method, culverts or other cross-drainage structures are used instead of porous layers to move surface and subsurface flows through the road fill material.
  - (a) For road construction on mineral soils or those with surface organic layers less than 16 inches in thickness, culverts or other crossdrainage structures shall be appropriately sized and placed at each end of each wetland crossing and at the lowest elevation on the road centerline with additional culverts at intermediate low points as necessary to provide adequate cross drainage. Culverts or other cross-drainage structures shall be placed at maximum intervals of 300 feet.
  - (b) For road construction on surface organic layers in excess of 16 inches but less than 4 feet in thickness, cross drainage must be provided by placing culverts at each end of each wetland crossing and at the lowest elevation on the road centerline with additional culverts at intermediate low points as necessary to provide adequate cross drainage. Culverts or other cross-drainage structures shall be placed at maximum 300-foot intervals. Culverts shall be a minimum of 24 inches in diameter, or the functional equivalent, and buried halfway below the soil surface.
  - (c) Where necessary to maintain existing water flows and levels in wetlands, ditches parallel to the road centerline shall be constructed along the toe of the fill to collect surface and subsurface water, carry it through the culvert(s) and redistribute it on the other side. Unditched breaks shall be left midway between culverts to prevent channelization.
- (2) Alternatively, a porous layer may be created to move surface and subsurface flows through the road fill materials. If a porous layer is used, geotextile fabric must be placed above and below fill material to increase the bearing strength of the road and to preserve the bearing strength of fill material by preventing contamination with fine soil particles.

#### b. Road construction on soils with organic layers in excess of 4 feet in thickness.

- (1) Such construction shall only take place under frozen ground conditions.
- (2) Geotextile fabric shall be placed directly on the soil surface. Road fill or log corduror shall then be placed on the geotextile fabric.
- (3) Cross drainage shall be provided by either a continuous porous layer or appropriate placement of culverts or other cross-drainage structures and ditching as specified below:
  - (a) A continuous porous layer or layers shall be constructed by placement of one or more layers of wood corduroy and/or large stone or chunkwood separated from adjacent fill layers by geotextile fabric placed above and below the porous layer(s) such that continuous cross drainage is provided in the top 12 inches of the organic layer; or
  - (b) Cross drainage culverts or other cross-drainage structures shall be placed at points where they will receive the greatest support. Culverts or other crossdrainage structures shall be a minimum of 24 inches in diameter, or the functional equivalent, and buried halfway below the soil surface. Where necessary to maintain existing water flows and levels in wetlands, ditches parallel to the roadbed on both sides shall be used to collect surface and subsurface water, carry it through the culvert(s) and redistribute it on the other side. Such ditches shall be located three times the depth of the organic layer from the edge of the road fill. Unditched breaks shall be left midway between culverts to prevent channelization.

#### OTHER ASSOCIATED STANDARDS

Ditches, culverts, bridges, dips, water turnouts and other water control installations associated with roads shall be maintained on a regular basis to assure effective functioning.

Other Associated Standards are continued on the next page...

- 5. Maintenance of the above required water control installations shall continue until the road is discontinued and put to bed by taking the following actions:
- a. Water bars shall:
  - (1) Be constructed and maintained across the road at intervals established below:

Road Grade	Distance Between Water Bars
(Percent)	(Feet)
0-2	250
3-5	200-135
6-10	100-80
11-15	80-60
16-20	60-45
21+	40

Table 10.27,D-3. Spacing requirements for water bars.

- (2) Be constructed at approximately 30 degrees downslope from the line perpendicular to the center line of the road;
- (3) Be constructed so as to reasonably avoid surface water flowing over or under the water bar; and
- (4) Extend sufficient distance beyond the traveled way so that water does not reenter the road surface.
- **b.** Any bridge or water crossing culvert in such road shall satisfy one of the following requirements:
  - (1) It shall be designed to provide an opening sufficient in size and structure to accommodate 25 year frequency water flows;
  - (2) It shall be designed to provide an opening with a cross-sectional area at least 3½ times the cross-sectional area of the stream channel; or
  - (3) It shall be dismantled and removed in a fashion so as to reasonably avoid sedimentation of the water body.
- 6. Provided they are properly applied and used for circumstances for which they are designed, methods including but not limited to the following are acceptable to the Commission as means of calculating the 10 and 25 year frequency water flows and thereby determining crossing sizes as required in Section 10.27,D,2 and 5:
- a. The USDA Soil Conservation Service (SCS) Methods; specifically: "Urban Hydrology for Small Watersheds," June 1986 Soil Conservation Service Technical Release #55.
- b. The United States Geological Survey Series; specifically: U.S.G.S. Maine Water Science Office. 1999. "Estimating the Magnitude of Peak Flows for Streams in Maine for Selected Recurrence Intervals." WRI 99-4008.
- 7. Extension, enlargement or resumption of use of presently existing roads, which are not in conformity with the provisions of Section 10.27,D, are subject to the provisions of Section 10.11.
- **8.** Publicly owned roads may be constructed in a fashion that is not in strict conformity with the provisions of this section, provided that other measures are applied that are effective in reasonably avoiding sedimentation of surface waters.
- 9. Except that Section 10.27,D,10 below always applies, trail crossings of minor flowing waters shall be exempt from the standards of Section 10.27,D, provided such crossings are constructed in a manner that causes no disturbance to the stream bed, and no substantial disturbance to the banks or shoreland areas in the vicinity of the crossing, and provided such crossings do not impede the flow of water or the passage of fish. If properly undertaken, acceptable methods may include but not be limited to the laying of logs from bank to bank, or placement of bed logs and stringers with decking. This exemption shall not extend to the construction of abutments or piers. Trail crossings not so exempted shall be subject to the water crossing standards of Section 10.27,D, including specifically Sections 10.27,D,2,4,5,6,10 and 11.
- **10.** In addition to the foregoing minimum requirements, provision shall otherwise be made in the construction and maintenance of roads and water crossings in order to reasonably avoid sedimentation of surface waters.
- 11. Written notice of all road and water crossing construction activities, except level A road projects and exempt trail crossings as provided in Section 10.27,D,9 above, shall be given to the Commission prior to the commencement of such activities. Such notice shall conform to the requirements of Section 10.16 and shall state the manner in which the water crossing size requirements of this section will be satisfied.

# **VEGETATION CLEARING STANDARDS (Section 10.27,B)**

#### **GENERAL REQUIREMENTS**

Cleared openings legally in existence as of June 7, 1990 may be maintained, but shall not be enlarged except as permitted by these regulations. In all areas where natural vegetation is removed within the required vegetative buffer strip of a flowing water, body of standing water, tidal water, or public roadway, it shall be replaced by other vegetation (except where the area cleared is built upon) that is effective in preventing erosion and retaining natural beauty.

#### **VEGETATIVE BUFFER STRIPS**

- 50 feet of the right-of-way or similar boundary of any public roadway,
- 75 feet of the normal high water mark of any body of standing water less than 10 acres in size, or any tidal water or flowing water draining less than 50 square miles,
- 100 feet of the normal high water mark of a body of standing water 10 acres or greater in size or flowing water draining 50 square miles or more.

#### REQUIREMENTS WITHIN BUFFER STRIPS

- There shall be **no cleared opening greater than 250 square feet** in the forest canopy as measured from the outer limits of the tree crown. However, a footpath is permitted, provided it does not exceed six (6) feet in width as measured between tree trunks, and has at least one bend in its path to divert channelized runoff.
- Selective cutting of trees within the buffer strip is permitted provided that a well-distributed stand of trees and other natural vegetation is
  maintained.

For the purposes of this section a "well-distributed stand of trees" adjacent to a body of standing water 10 acres or greater in size shall be defined as maintaining a rating score of 24 or more in a 25-foot by 50-foot rectangular area as determined by the following rating system. Near other water bodies, tributary streams and public roadways a "well-distributed stand of trees" shall be defined as maintaining a rating score of 16 or more per 25-foot by 50-foot (1,250 square feet) rectangular area as determined by the following rating system (see table)

Above Ground Level (inches)	Points
2.0 to < 4.0	1
4.0 to < 8.0	2
8.0 to < 12.0	4
12.0 +	8

"Other natural vegetation" is defined as retaining existing vegetation under 3 feet in height and other ground cover and retaining at least 5 saplings less than 2 inches in diameter at 4½ feet above ground level for each 25-foot by 50-foot rectangular area. If 5 saplings do not exist, the landowner or lessee may not remove any woody stems less than 2 inches in diameter until 5 saplings have been recruited into the plot. In addition, the soil shall not be disturbed, except to provide for a footpath or other permitted use.

The following shall govern in applying this rating system:

- (1) The 25-foot x 50-foot rectangular plots shall be established where the landowner or lessee proposes clearing within the required buffer
- (2) Each successive plot shall be adjacent to but not overlap a previous plot
- (3) Any plot not containing the required points shall have no vegetation removed except as otherwise allowed by these rules
- (4) Any plot containing the required points may have vegetation removed down to the minimum points required or as otherwise allowed by these rules
- (5) Where conditions permit, no more than 50% of the points on any 25-foot by 50-foot rectangular area may consist of trees greater than 12 inches in diameter
- In addition, **no more than 40% of the total basal area of trees 4.0 inches or more in diameter**, measured at 4½ feet above ground level, may be removed in any ten (10) year period.
- **Pruning of live tree branches is prohibited**, except on the bottom 1/3 of the tree provided that tree vitality will not be adversely affected.
- In order to maintain a buffer strip of vegetation, when the removal of storm-damaged, diseased, unsafe, or dead trees results in the
  creation of cleared openings in excess of 250 square feet, these openings shall be established with native tree species.

# REQUIREMENTS GREATER THAN ONE HUNDRED (100) FEET FROM GREAT PONDS (>10 acres)

The following provisions apply to areas within 250 feet of all bodies of standing water greater than ten (10) acres, and to the full depth of the P-AL zone.

- No more than 40% of the total basal area of trees 4.0 inches or more in diameter, measured at 4½ feet above ground level, may be removed in any ten (10) year period.
- In no instance shall cleared openings exceed, in the aggregate, 10,000 square feet, including land previously cleared.

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# FILLING AND GRADING STANDARDS (Section 10.27,F)

### **GENERAL REQUIREMENTS**

- Imported fill material shall not contain debris, trash, rubbish or hazardous or toxic materials. All fill, regardless of where placed, shall be free of hazardous or toxic materials.
- All filled or graded areas shall be promptly stabilized to prevent erosion and sedimentation.

### REQUIREMENTS NEAR WATER BODIES AND WETLANDS

•	Within 250 feet of water bodies and wetlands, the maximum size of a filled or graded area, on any single lot or parcel, shall be <b>5,000 square feet</b> . This shall include all areas of mineral soil disturbed by the filling or	Average Slope of Land Between Exposed Mineral Soil and Normal High Water Mark or Upland Edge (Percent)	Width of Strip Between Exposed Mineral Soil and Normal High Water Mark or Upland Edge (Feet Along Surface of the Ground)
	grading activity. These filled or graded areas shall be stabilized according to the Guidelines for Vegetative	10 or less	100
	Stabilization.	20	130
•	Such filled or graded areas shall not extend closer to the normal high water mark of a flowing water, a body of standing water, tidal water, or upland edge of wetlands identified as P-WL1 subdistrict than the distance indicated in the table to the right:	30	170
		40	210
		50	250
		60	290

#### OTHER REQUIREMENTS

**Beyond 250 feet** from water bodies and wetlands, the maximum size of filled or graded areas shall be **20,000 square feet**, except that there shall be no limit to the size of filled or graded areas in M-GN subdistricts which are greater than 250 feet from water bodies and wetlands.

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# VEHICULAR CIRCULATION, ACCESS AND PARKING (Section 10.25,D)

- 1. General circulation. Provision shall be made for vehicular access to and within the project premises in such a manner as to avoid traffic congestion and safeguard against hazards to traffic and pedestrians along existing roadways and within the project area. Development shall be located and designed so that the roadways and intersections in the vicinity of the development will be able to safely and efficiently handle the traffic attributable to the development in its fully operational stage.
- 2. Access management. Access onto any roadway shall comply with all applicable Maine Department of Transportation safety standards. For subdivisions and commercial, industrial and other non-residential development, the following standards also apply:
- a. The number and width of entrances and exits onto any roadway shall be limited to that necessary for safe entering and exiting.
- b. Access shall be designed such that vehicles may exit the premises without backing onto any public roadway or shoulder.
- c. Shared access shall be implemented wherever practicable.
- **d.** Access between the roadway and the property shall intersect the roadway at an angle as near to 90 degrees as site conditions allow, but in no case less than 60 degrees, and shall have a curb radius of between 10 feet and 15 feet, with a preferred radius of 10 feet.
- e. The Commission may require a traffic impact study of roadways and intersections in the vicinity of the proposed project site if the proposed development has the potential of generating significant amounts of traffic or if traffic safety or capacity deficiencies exist in the vicinity of the project site.
- 3. Parking layout and design. The following standards apply to all subdivisions and commercial, industrial and other non-residential development, except for parking areas associated with trailered ramps and hand-carry launches which are regulated under the provisions of Section 10.27.L:
- a. Sufficient parking shall be provided to meet the parking needs of the development. The minimum number of parking spaces required shall be based on parking generation rates determined in accordance with standard engineering practices. In cases where it is demonstrated that a particular structure can be occupied or use carried out with fewer spaces than required, the Commission may reduce number of required spaces upon finding that the proposed number of spaces will meet the parking needs of the structure or use and will not cause congestion or safety problems.
- **b.** Parking areas and access roads shall be designed such that runoff water is discharged to a vegetated buffer as sheet flow or alternatively collected and allowed to discharge to a concentrated flow channel, wetland or water body at a rate similar to pre-construction conditions. If runoff water is discharged to a concentrated flow channel, wetland or water body, a sediment basin shall be constructed to collect sediment before the runoff water is discharged.
- c. On-street parking. In areas where on-street parking already exists, new development shall have on-street parking where practicable and if there are sufficient spaces available in the immediate vicinity. Otherwise, parallel or diagonal on-street parking is permitted where the Commission finds that it will adequately meet the parking needs of the development and will not cause congestion or safety problems. Perpendicular on-street parking is prohibited.
- d. Off-street parking for commercial, industrial and other non-residential development.
  - (1) Where practicable, off-street parking shall be located to the side or rear of the principal structure.
  - (2) Notwithstanding the dimensional requirements of Section 10.26, the Commission may reduce the minimum road setback requirement by up to 50 percent for development utilizing on-street parking in accordance with Section 10.25,D,3,c or for development whose parking area is located to the rear of the principal structure, except where the Commission finds that such parking will cause an undue adverse impact to the natural resources or community character of the area.
  - (3) Off-street parking shall not be directly accessible from any public roadway. Ingress and egress to parking areas shall be limited to driveway entrances.
  - (4) Off-street parking areas with more than two parking spaces shall be arranged so that each space can be used without moving another vehicle.
- e. Parking spaces shall not be placed in the required roadway vegetative buffer. However, a "sight triangle" shall be maintained 25 feet in length on each side of the intersection of the driveway and the roadway right-of-way, with the third side connecting the other two sides. Within each sight triangle, no landscape plants, other than low growing shrubs, shall be planted. These shrubs must be maintained to be no more than 30 inches in height above the driveway elevation.

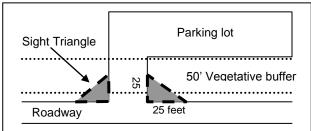


Figure 10.25,D-2. Sight triangle within a vegetative buffer.

- f. Except for sight triangles, parking areas for commercial, industrial or other non-residential development shall be visually buffered from the roadway by planting and maintaining a vegetative buffer of trees and shrubs or by locating parking areas to the rear of the principal structure.
- g. When parking areas associated with commercial, industrial or other non-residential development are adjacent to residential structures or uses, landscaping and/or architectural screens shall be used to provide an effective visual buffer and separation between property lines and the edge of the parking area.
- h. For parking areas associated with commercial, industrial or other non-residential development that are greater than one acre in size, a landscaping plan shall be developed and implemented that indicates planting locations, type and maintenance. The plan shall include the following:
  - (1) Parking areas shall have landscaped strips along the perimeter, as well as landscaped islands within the parking area.
  - (2) Expanses of parking area shall be broken up with landscaped islands that include shade trees and shrubs. Where possible, the area of ground left uncovered around the base of a tree must be at least equal to the diameter of the branch area or crown at maturity. Where not possible, adequate measures, including but not limited to soil enhancement techniques and underground irrigation, shall be used to ensure sufficient space for root growth and vegetative survival.
- Subdivision and development roadway design specifications. The following standards apply to Level B and Level C road projects:
- a. Classification of roadways. The Commission shall determine which roadway classification is most appropriate for a particular project. For the purposes of Section 10.25,D,4, the following general criteria shall apply:
  - (1) Class 1 Roadway. Generally appropriate for most projects surrounded by a relatively compact development pattern, for high-intensity commercial or industrial projects, and for residential subdivisions with 15 or more lots.
  - (2) Class 2 Roadway. Generally appropriate for low-intensity commercial or industrial projects surrounded by a relatively sparse development pattern and for residential subdivisions with fewer than 15 lots surrounded by a relatively sparse development pattern.
  - (3) Class 3 Roadway. Generally appropriate for low-intensity, small-scale commercial projects surrounded by a relatively sparse development pattern or located on an island.
- b. In making its determination on the appropriate roadway classification, the Commission shall consider the following factors:
  - (1) The number of lots served by the roadway or projected level of use;
  - (2) The nature of roadways accessing the project site:
  - (3) Location in relation to surrounding patterns of development;
  - (4) The level of development within the vicinity of the project;
  - (5) Natural and imposed limits on future development:
  - (6) The type and intensity of the proposed use; and
  - (7) Service by utilities or likelihood of service in the future.
- c. Where practicable, roadways shall be designed to minimize the use of ditching, fit the natural topography of the land such that cuts and fills are minimized, and protect scenic vistas while preserving the scenic qualities of surrounding lands.
- d. Roadways in towns and plantations within the Commission's jurisdiction that are proposed to be dedicated to the town or plantation shall also comply with the town's or plantation's roadway construction and design standards. The applicant shall clearly specify the ownership of all roadways proposed to be dedicated and shall submit a maintenance plan that includes roadway construction and design standards in accordance with the Commission's standards.
- e. Roadways shall adhere to the applicable standards of Section 10.27,D and Section 10.27,H and the roadway specifications outlined in Table 10.25, D-1, below, unless the applicant utilizes site-specific best management practices and the Commission determines that proposed alternative roadway specifications will meet the needs of the development and will not cause erosion or safety problems.

	Class 1 Roadway	Class 2 Roadway	Class 3 Roadway
Minimum roadway surface width	18 ft. or 14 ft. with turnouts every 500 feet, on average.	14 ft. or 8 ft. with turnouts every 500 feet, on average.	8 ft.
Minimum base (coarse gravel)	18 in.	12 in.	As needed.
Minimum wearing surface	3 in. fine gravel or 2.5 in. bituminous concrete.	3 in. fine gravel or 2.5 in. bituminous concrete.	2 in. fine gravel.
Maximum sustained grade	10%	15%	15%

Table 10.25, D-1. Roadway construction specifications.

f. Roadways that will be co-utilized for forest management purposes shall include turnouts that are large enough to accommodate wood haulers and other large vehicles.

# Guidelines for Private Roads or Ways in the Land Use Planning Commission's Management Districts

#### Chapter 15 of the Commission's Rules

### 15.01 Introduction

The Land Use Planning law (12 M.R.S.A. § 685-A(5)) provides that roads in management districts constructed and maintained in accordance with the guidelines of Section 6 of the Commission's Land Use Handbook, "Erosion Control on Logging Jobs," as originally published or subsequently revised, do not require a permit. Chapter 15 was adopted as a supplement to Section 6 of the Land Use Handbook and includes these guidelines, which have the following objectives:

- 1. To fulfill the Legislature's intent, expressed in 12 M.R.S.A. § 685-A(5), that roads in upland areas, including private roads, adhere to basic environmental standards:
- 2. To provide guidelines for the location and construction of certain roads in management districts, a type of activity which the original version of Section 6 of the Land Use Handbook was not designed to address directly;
- 3. To provide meaningful guidelines for such roads in a manner that is consistent with the spirit and intent of the law, Section 6 of the Handbook, and the LUPC regulations for roads in protection districts;
- 4. To maintain the integrity of Section 6 of the Handbook as an informal educational booklet designed for small logging operations by providing these guidelines as a supplement to the Handbook.

#### 15.02 Applicability

These guidelines apply to construction of private roads and ways covering 3 or more acres in the LUPC management districts. Road construction that complies with these guidelines does not require a permit from the Commission, except as provided in the Commission's wetland rules in Chapter 10. Other roads are regulated according to Chapter 10, *Land Use Districts and Standards*, of the Commission's rules.

The following table may be used as a guide in determining whether a proposed road exceeds the three-acre threshold:

# TABLE FOR DETERMINING WHEN A ROAD AFFECTS THREE OR MORE ACRES OF GROUND AREA

Width of road	Length of road at which
(includes only unvegetated portion of ROW)	three acres of area is affected
(feet)	(miles)
12	2.06
16	1.55
20	1.24
24	1.03
28	0.88
32	0.77
36	0.69
40	0.62

In calculating whether the three-acre threshold of the law has been exceeded:

- 1. The area of continuous road to be constructed, exclusive of banks, ditches, and portions of the right-of-way which are to be revegetated within two growing seasons from the time of construction, shall be included.
- 2. The area of roads constructed prior to January 5, 1981, shall not be included, unless otherwise specified.
- The reconstruction of an existing road, including widening or straightening, shall be included.
- 4. Normal maintenance of an existing road, including gravel resurfacing, grading, reditching, reshaping, culvert maintenance and replacement, and the clearing of brush, shall not be included.

Once a continuous stretch of road exceeds the three-acre threshold, all portions of the road and additions to the road must comply with these standards in order to qualify for exemption from permitting.

# **Guidelines for Roads in Management Districts**

#### 15.03 Planning and Location (Refer to Handbook, Section 6)

- 1. The location of roads should be planned and laid out, both on paper and on the ground, before starting construction.
- 2. As a general rule, landowners should give advance consideration to avoiding areas where road location or increased public access are not desirable. In this regard, areas near water bodies and in wetlands, steep slopes, wildlife habitat, high mountain areas, areas of historical or cultural significance, and remote recreational areas should be avoided wherever possible. MLUPC REGS, CHAP 15 3
- 3. Roads should be laid out so that the number of stream crossings is kept to the minimum practicable. In order to avoid excessive cuts and

fills, the general contours of the land should be utilized to the fullest extent possible.

- 4. To facilitate the control of water and drainage of road surfaces, roads should also be laid out, whenever practical, to utilize southerly slopes and to follow contours of side slopes.
- 5. Road grades should be kept below ten percent except for short distances where the grade may exceed ten percent.

#### 15.04 Construction Techniques (Refer to Handbook, Section 6)

- 1. During road construction, reasonable measures should be undertaken to control water runoff and erosion in order to avoid sedimentation of water bodies.
- 2. Drainage ditches should be provided whenever necessary to effectively control water entering and leaving the road area.
- 3. Cut and fill sections and road banks should be effectively stabilized so as to prevent erosion or slumping.
- 4. In order to prevent road surface drainage from directly entering water bodies, roads and their associated drainage ditches, should be located, constructed and maintained so as to leave an unscarified filter strip, of at least the width indicated in the following table, between the exposed mineral soil of the road and the normal high water mark of the surface waterbody or water course:

Average Slope of Land Between Exposed Mineral Soil and Normal High Water Mark	Width of Strip Between Exposed Mineral Soil and Normal High Water Mark
(Percent)	(Feet Along Surface of the Ground)
0	25
10	45
20	65
30	85
40	105
50	125
60	145
70	165

This guideline shall not apply to road approaches to water crossings.

- 5. Drainage ditches for roads approaching a water crossing should be designed, constructed, and maintained to empty into an unscarified filter strip, of at least the width indicated in the table set forth in Subsection 4 above, between the outflow point of the ditch and the normal high water mark of the waterbody. Where such filter strip is impracticable, other appropriate techniques should be used to reasonably avoid sedimentation of the waterbody. Such techniques may include the installation of sump holes or settling basins, and/or the effective use of additional ditch relief culverts and ditch water turnouts placed so as to reasonably avoid sedimentation of the waterbody.
- 6. Cross drainage culverts or drainage dips should be installed to get drainage water from the uphill side of the road to the downhill side before the flow in drainage ditches or roads gains sufficient volume or head to cause erosion and water sedimentation.

Drainage water on the downhill side of the road should be diverted from the road ditch into vegetated areas by installation of water turnouts spaced so as to prevent the flow in the ditch from gaining sufficient volume or head to cause erosion and water sedimentation.

Such water diversion structures should be located and constructed as follows:

- a. Drainage dips should be used in place of ditch relief culverts only where the road grade is 10 percent or less. Such dips should be constructed so that the road slope is reversed, the base of the dip drains to the outslope, and the surface of the dip is graveled.
- b. On roads having slopes greater than 10%, ditch relief culverts should be placed across the road at approximately a 30 degree angle downslope from a line perpendicular to the center line of the road.
- c. Culverts and drainage dips should also be installed so as to direct drainage water onto an unscarified filter strip.
- d. Inlet end of culverts should extend into side ditches to intercept ditch flows and should be adequately stabilized by riprap or other suitable means to reasonably avoid erosion of material around the culvert.
- e. Culverts, drainage dips, and water turnouts should be spaced along the road at intervals which are sufficient to prevent the water flow in drainage ditches or roads from gaining sufficient volume or head to cause erosion and water sedimentation.

As a general guide, culverts, dips and water turnouts should be space as follows:

ROAD GRADE (Percent)	SPACING (feet)
1-2	1,000
3-5	800-500
6-10	400-200
11-15	180-130
16-20	125-120

f. Cross drainage culverts should be sufficiently sized and properly installed in order to allow for drainage of storm or spring water runoff.

#### 15.05 Maintenance and Abandonment (Refer to Handbook, Section 6)

- 1. Measures should be undertaken to maintain water diversion structures so as to control water runoff and avoid sedimentation of water.
- 2. Ditches, culverts and other water control installations should be inspected, cleaned out and maintained on a regular basis in order to remove debris and to assure normal functioning at all times. MLUPC REGS, CHAP 15 5
- 3. Maintenance of water control installations should continue until the road is discontinued and put to bed by pulling of culverts, installation of water bars or other measures which are effective in stabilizing the area.

Where utilized, water bars should:

a. be constructed and maintained across the road at intervals which are sufficient to effectively control water runoff.

The following table should be used as a general guide in determining appropriate spacing of water bars:

Road Grade (Percent)	Distance Between Water Bars (feet)
1-2	250
3-5	200-135
6-10	100-80
11-15	80-60
16-20	60-45
21+	40

- b. be constructed at approximately 30 degrees downslope from the line perpendicular to the center line of the road;
- c. be constructed so as to effectively prevent surface water from flowing over or under the water bar; and
- d. extend sufficient distance beyond the traveled way so that water does not reenter the road surface.